Enzyme Finder By Sequence

Use this tool to select restriction enzymes by name, sequence, overhang, or type.
Sequences should be entered using single letter code nomenclature.
In search results, enzymes supplied by NEB are listed first and displayed as links.

Search by Sequence

Enter a recognition site:

CCATC GO

(•) Exact matches only

( ) All possible matches (including ambiguities)

Enzyme	Sequence	Cut Site	Overhang	Properties (NEB Enzymes Only)
BccI	CCATC	5' C C A T C N N N N/N 3' 3' G G T A G N N N N N/ 5'	5' - N	RR NEB1 BSA 37° Yes

BccI

Nomenclature Update

Catalog #	Size	Concentration	Price	Qty	
R0704S	1,000 units	10,000 units/ml	$61.00	1	ADD TO CART
R0704L	5,000 units	10,000 units/ml	$244.00	1	ADD TO CART

Prices are in US dollars and valid only for US orders.

Download: MSDS PDF

Recognition Site:

5′...CCATC(N)$_4$▼...3′
3′...GGTAG(N)$_5$▲...5′

isoschizomers | compatible ends | single letter code

Source:
A *E. coli* strain that carries the BccI gene from *Bacteroides caccae* (ATCC 43185).

Reagents Supplied:
NEBuffer 1
BSA

Enzyme Properties

Activity in NEBuffers:
NEBuffer 1: 100%
NEBuffer 2: 50%
NEBuffer 3: 10%
NEBuffer 4: 50%

When using a buffer other than the optimal (supplied) NEBuffer, it may be necessary to add more enzyme to achieve complete digestion.

Methylation Sensitivity:
dam methylation: Not sensitive
dcm methylation: Not sensitive
CpG methylation: Not sensitive

Heat Inactivation:
65°C for 20 minutes

Survival in a Reaction:
Minimum units to digest 1 µg of substrate DNA in 16 hours: 0.50 unit(s)

Reaction & Storage Conditions

Reaction Conditions:
1X NEBuffer 1
Supplemented with 100 µg/ml Bovine Serum Albumin
Incubate at 37°C.

1X NEBuffer 1:

10 mM Bis-Tris-Propane-HCl
10 mM $MgCl_2$
1 mM Dithiothreitol
pH 7.0 @ 25°C

Unit Definition:
One unit is defined as the amount of enzyme required to digest 1 µg of Adenovirus-2 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.

Concentration:
10,000 units/ml

Unit Assay Substrate:
Adenovirus-2 DNA

Storage Conditions:
10 mM Tris-HCl
50 mM KCl
1 mM Dithiothreitol
0.1 mM EDTA
200 µg/ml BSA
50% Glycerol
pH 7.4 @ 25°C

Storage Temperature:
-20°C

Diluent Compatibility:
Diluent A

Quality Control for Current Lot

Quality control values for a specific lot can be found on the datacard which accompanies each product.

Ligation and Re-cutting:
After a 20-fold overdigestion with BccI, approximately 50% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5' termini concentration of 1-2 µM) at 16°C. Of these ligated fragments, > 95% can be recut with BccI.

16-Hour Incubation:
A 50 µl reaction containing 1 µg of pBR322 DNA and 5 units of BccI incubated for 16 hours at 37°C resulted in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Exonuclease Activity:
Incubation of a 50 µl reaction containing 60 units of BccI with 1 µg of a mixture of single and double-stranded [^{3}H] *E. coli* DNA (10^5 cpm/µg) for 4 hours at 37°C released < 0.1% of the total radioactivity.

Reagents Sold Separately

NEBuffer 1
BSA